

IN THE SPECIFICATION:

Please replace the first paragraph on page 10 with the following:

Fig. 2A is a sectional view of a PIN photo diode according to ~~the present~~ an embodiment of the present invention, and Fig. 2B is a view of the spread of a depletion layer when an inverse bias is applied to the PIN photo diode in Fig. 2A;

Please replace the third paragraph of page 10 with the following:

Fig. 4 ~~show~~ shows the impurity profile in a depth direction of a PIN photo diode according to an embodiment of the present invention; and

Please replace the fourth paragraph of page 10 with the following:

Fig. 5 is a view of the dependence on the wavelength of incident light of the sensitivity of a PIN photo diode according to an embodiment of the present invention.

Please replace the first paragraph of the "DESCRIPTION OF THE PREFERRED EMBODIMENTS" section with the following:

Below, preferred embodiments of the present invention will be described with reference to the accompanying drawings.

Please replace the third full paragraph of page 11 with the following:

When applying a predetermined inverse bias of, for example, about 2.5V to the pn-junction of the PIN photo diode shown in Fig. 2A, the depletion layer V spreads to the directions of the p-type semiconductor layer 11 and n-type semiconductor layer from the pn-junction surface as shown in Fig. 2B.

Please replace the first full paragraph of page 16 with the following:

Accordingly, in Fig. 2B, it is preferable to use as a semiconductor substrate 10, a substrate with a surface concentration of the p-type impurity of at least $1 \times 10^{17}/\text{cm}^3$, and to bring an end face S_a of the depletion layer V on the semiconductor substrate 10 side and the surface S_b of the semiconductor substrate 10 closer to a predetermined distance or less (for example, 3 μm or less). By doing so, carriers generated in the regions of the low impurity concentration other than the depletion layer are reduced, the frequency characteristics of the photo diode are improved, and ~~it becomes to obtain~~ a high speed can be obtained.